



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,309	11/02/2001	Mohamed A. Megahed	01CON279P	4718

25700 7590 02/03/2003

FARJAMI & FARJAMI LLP  
16148 SAND CANYON  
IRVINE, CA 92618

EXAMINER

CHAMBLISS, ALONZO

ART UNIT PAPER NUMBER

2827

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/016,309

Applicant(s)

MEGAHED ET AL.

Examiner

Alonzo Chambliss

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The change of address filed on 9/14/02 has been fully considered and made of record in Paper No. 3.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 5, 6, 12, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. In claims 5, 6, 12, 18, and 19, the phrase "bond pad is specialized" is vague and indefinite since it not clear how the bond pad is specialized.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20, insofar as definite, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Merrill et al. (U.S. 5,886,393).

With respect to Claim 1, 2, 8, 10, 11, and 15, Merrill teaches a semiconductor die 28 having a source bond pad 172a (i.e. first semiconductor bond pad) and a destination

bond pad 172b (i.e. second semiconductor bond pad) attached to a top surface of said semiconductor die 28 (see Fig. 5). It should be noted that any one of the bonding pads 172a-172d can be a source bond pad or destination bond pad. A stud bump 175 is situated on said destination bond pad 172b. A bonding wire 173a (i.e. first conductor) provides a connection between the source bond pad 172a and the stud bump 175. The first end of the bonding wire 173a is bonded to the source bond pad 172a while the second end of the bonding wire 173a is bonded to the stud bump 175. A bonding wire 173b provides a connection between the second semiconductor bond pad 172b and a third semiconductor bond pad 172c. The source bond pad 172a being a first terminal of the inductor and the destination bond pad 173b being a second terminal of the inductor (see col. 6 lines 42-67; Figs. 5 and 6).

With respect to Claims 3 and 16, since the bonding terminal pads may be readily modified depending upon the specific type of bond or bonds applied as stated in col. 4 lines 42-46 and col. 7 lines 33-42. Merrill teaches wherein a first end of the bonding wire 173a is ball bonded to the source bond pad 173b (see Fig. 5).

With respect to Claims 4 and 17, since the bonding terminal pads may be readily modified depending upon the specific type of bond or bonds applied as stated in col. 4 lines 42-46 and col. 7 lines 33-42. Merrill teaches wherein a second end of the bonding wire 173a is stitch bonded to the stud bump 175 (see Fig. 6).

With respect to Claims 5, 6, 12, 18, and 19, Merrill teaches the source and destination bond pads and a third semiconductor die bond pad 172c are for an inductive assembly (i.e. specialized operation for the chip) (see col. 6 lines 42-67).

With respect to Claims 7, 14, and 20, Merrill teaches wherein an inductance of the inductor is increased by increasing a loop height of the bonding wires 173a-173d, and wherein the inductance of the inductor is decreased by decreasing said loop height of the bonding wires 173a-173d (see col. 5 lines 3-34).

With respect to Claim 9, since the bonding terminal pads may be readily modified depending upon the specific type of bond or bonds applied as stated in col. 4 lines 42-46 and col. 7 lines 33-42. Merrill teaches a stud bump 175 situated on the second semiconductor die bond pad 172b, wherein the bonding wire 173b provides the connection between the stud bump and the third semiconductor die bond pad 172c (see Fig. 5).

With respect to Claim 13, Merrill teaches a second conductor 173c providing connection between the third semiconductor die bond pad 172c and a fourth semiconductor die bond pad 172d (see Fig. 5).

The prior art made of record and not relied upon is cited primarily to show the product of the instant invention.

### ***Conclusion***

7. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for this Group is (703) 308-7722 or 7724.

Art Unit: 2827

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956.

**AC**/January 27, 2003



Alonzo Chambliss  
Patent Examiner  
Art Unit 2827